

## ABSTRACT

According to this invention, there are provided a process for manufacturing a water-absorbing composite comprising the steps of:

- (A) spraying an aqueous monomer solution containing acrylic acid and/or its salt on a heat-raised fibrous substrate to apply droplets of the aqueous monomer solution on the fiber constituting the fibrous substrate;
- (B) polymerizing the monomers in the droplets to form a water-absorbing composite in which the water-absorbing resin particles adhere to the fiber; a process for manufacturing a thermally-compressed water-absorbing composite further comprising step (C): further thermally compressing the above water-absorbing composite; and a process for manufacturing a laminated water-absorbing composite further comprising step (D): laminating the water-absorbing composite and a fibrous substrate to form a laminate and then thermally compressing the laminate to thermally fuse the water-absorbing composite and the fibrous substrate.

(12)特許協力条約に基づいて公開された国際出願

(19)世界知的所有権機関  
国際事務局(43)国際公開日  
2004年3月18日 (18.03.2004)

PCT

(10)国際公開番号  
WO 2004/022840 A1(51)国際特許分類<sup>7</sup>: D06M 15/263, 14/10,  
13/203, D06C 11/00, C08F 20/06, 2/00

(21)国際出願番号: PCT/JP2003/011149

(22)国際出願日: 2003年9月1日 (01.09.2003)

(25)国際出願の言語: 日本語

(26)国際公開の言語: 日本語

(30)優先権データ:  
特願2002-258413 2002年9月4日 (04.09.2002) JP  
特願2002-290358 2002年10月2日 (02.10.2002) JP  
特願2003-159488 2003年6月4日 (04.06.2003) JP

(71)出願人(米国を除く全ての指定国について): 大王製紙株式会社 (DAIO PAPER CORPORATION) [JP/JP]; 〒799-0492 愛媛県伊予三島市紙屋町2番60号 Ehime (JP). 東亞合成株式会社 (TOAGOSEI CO., LTD.) [JP/JP]; 〒105-8419 東京都港区西新橋1丁目14-1 Tokyo (JP).

(72)発明者: および

(75)発明者/出願人(米国についてのみ): 野村 幸司 (NOMURA,Kouji) [JP/JP]; 〒455-0026 愛知県名古屋市港区昭和町17番地23 東亞合成株式会社 生産技術研究所内 Aichi (JP). 美保 享 (MIHO,Susumu) [JP/JP]; 〒455-0026 愛知県名古屋市港区昭和町17番地23 東亞合成株式会社 生産技術研究所内 Aichi (JP). 山本 浩司 (YAMAMOTO,Koushi) [JP/JP]; 〒455-0026 愛知県名古屋市港区昭和町17番地23 東亞合成株式会社 生産技術研究所内 Aichi (JP).

(74)代理人: 高畠 靖世 (TAKAHATA,Yasuyo); 〒170-0013 東京都豊島区東池袋3丁目1番4号 メゾンサンシャイン1004号 Tokyo (JP).

(81)指定国(国内): AU, BR, CA, CN, KR, US.

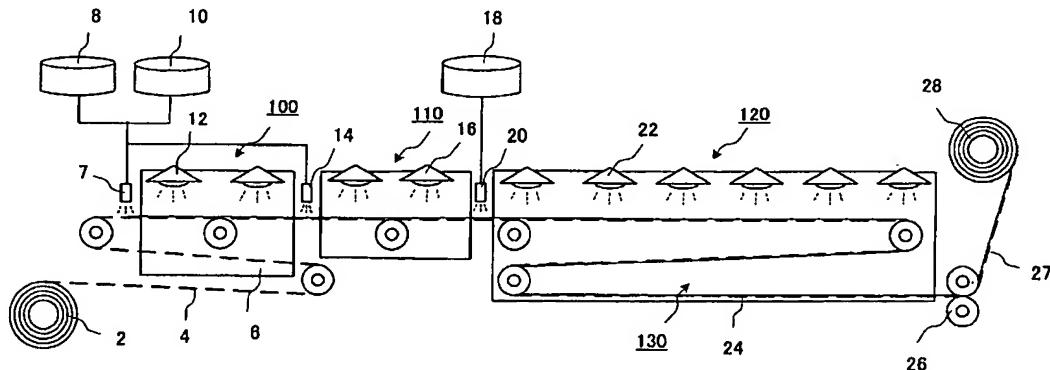
(84)指定国(広域): ヨーロッパ特許 (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

添付公開書類:  
— 国際調査報告書

[続葉有]

(54) Title: METHOD FOR PRODUCING WATER-ABSORBING COMPOSITE

(54)発明の名称: 吸水性複合体の製造方法



(57) Abstract: A method for producing a water-absorbing composite which comprises the steps of (A) and (B): (A) a step of spraying an aqueous monomer solution containing acrylic acid and/or its salt onto a fibrous substrate having been raised by heating, to thereby allow the fiber constituting the fibrous substrate to carry drops of the aqueous monomer solution, and (B) a step of polymerizing the monomer present in the drops, to thereby prepare the water-absorbing composite having water-absorbing resin particles attached to the fiber; a method for producing a heat-compressed water-absorbing composite which comprises a step (C) of compressing the above water-absorbing composite while heating; and a method for producing a laminate type water-absorbing composite which comprises a step (D) of compressing a laminate prepared from the water-absorbing composite and another fibrous substrate while heating, to fuse the composite with the another substrate.

[続葉有]

WO 2004/022840 A1